
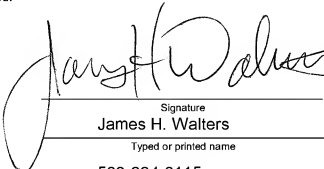


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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) A-468
<p>I hereby certify that this correspondence is being deposited by EFS addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on April 3, 2007 Signature  Typed or printed name James H. Walters</p>	<p>Application Number 10/737,393</p> <p>Filed 12/16/2003</p> <p>First Named Inventor Kenichi MORIMOTO</p> <p>Art Unit 1763</p> <p>Examiner Allan W. Olsen</p>	
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="width: 45%;"> <p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record. 35,731 Registration number _____</p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p> </div> <div style="width: 50%; text-align: center;">  <p>Signature James H. Walters</p> <p>Typed or printed name</p> <p>503-224-0115</p> <p>Telephone number</p> <p>April 3, 2007</p> <p>Date</p> </div> </div> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.</p>		
<p><input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted.</p>		

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Confirmation No.: 5877

Kenichi MORIMOTO

Art Unit: 1763

S. N. 10/737,393

Examiner: Allan W. Olsen

Filed: December 16, 2003

For: MASK BLANK FOR CHARGED PARTICLE BEAM EXPOSURE, METHOD OF
FORMING MASK BLANK AND MASK FOR CHARGED PARTICLE BEAM EXPOSURE

PRE-APPEAL REVIEW COMMENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Please consider the following arguments prior to appeal.

Rejection is made under 35 U.S.C. §102(b) on US Patent 5,756,237 (Amemiya). It is noted that this patent is not cited of record in the application, so it should not be available to reject the claims. Also, the rejection does not specifically state which claims are rejected. Applicant respectfully submits that the claimed invention would not be anticipated by this document even if it is cited of record.

1) In a blank of the present invention, a silicon oxide film exposed from an opening formed by removing silicon on a back surface side of an SOI substrate is removed, and an etching stop layer having lower stress is provided in place of the removed silicon oxide film.

In a transfer mask according to Amemiya (US Patent 5,756,237), however, as shown in FIG 10D, a resist (protective material 8) is filled "without" removing a silicon oxide film

exposed from an opening formed by removing silicon on a back surface side of an SOI substrate.

In addition, as noted by the following comment from the inventor, the protective material 8 of the Amemiya does not have a function of the etching stop layer like the present invention. Therefore, configurations of the above inventions are entirely different from each other.

The resist 8 in FIG 10D does not function as an etch stopper in dry etching of the Si Layer 1 (refer to FIG 10A). The resist 8 is for protecting the SiO₂ layer 2 of the window 12 part when a desired part (a part other than window 12) of the SiO₂ layer 2 is removed with dilute hydrofluoric acid.

Therefore, the resist 8 is entirely different from the etching stop layer in Claim 1 of the present invention. (Claim 1 of the present invention is described to function as the etching stop layer in dry etching of the Si Layer. On the other hand, Amemiya describes a method for protecting the SiO₂ layer 2 of the window 12 part from wet etching by dilute hydrofluoric acid.)

Please note that there is an apparent error in FIG 10D.

As is apparent from FIG 10C, FIG 10E, and the description of lines 22 to 39 of column 13, the SiO₂ layer 2 should originally have existed between the Si Layer 1 and the resist 8 of FIG 10D. That is, the SiO₂ layer

2 functions as an etch stopper in dry etching of the Si Layer 1, and the resist 8 is not to function as an etch stopper in dry etching of the SI layer 1.

Claims 1-4 and 10 are rejected as being anticipated under 35 U.S.C. §102(b) by EP 1065566 (Hoya).

The Examiner seems to assert that, in the blank of the cited EP 1065566 (FIG 15E), the pattern supporting layer 55 corresponds to the etching stop layer 39 of the present invention and also that EP 1065566 discloses that the pattern supporting layer 55 is TiN, which is the same material as found in Claims of the present invention. Therefore, it is concluded, both inventions have the same stress. Applicant respectfully traverses.

The fact that the same material is used, does not necessarily mean the stress is also the same.

Stress is not a physical property determined by a material, but changes depending on a structure including the layer and a manufacturing method thereof. In fact, stress can be controlled by a manufacturing method, and for this reason, Cr layer of a photo-mask, for example, is put into practice (without having the under layer Qz distorted).

Applicant respectfully submits that the pattern supporting layer 55 of the cited EP 1065566 has strong pulling stress (stress of the layer itself trying to contract). This is because the pattern supporting layer 55 of the EP 1065566 is not removed in the process of manufacturing a mask, and is a layer for

supporting scatterer (pattern). Therefore, at a stage of the blank, the layer 55 is considered to be in a tense state, that is, a state of pulling stress.

On the other hand, the etching stop layer (39) of the present invention is removed in the process of manufacturing the mask (FIG 4) and is not a supporting member of the mask pattern (42). Therefore, there is no problem if the etching stop layer has lower internal stress than the silicon oxide film (33). The etching stop layer having lower stress instead is to be used so that the silicon thin film layer is not deformed.

Since in view of the above, the cited EP 1065566 does not disclose "the etching stop layer having 'lower stress' than the stress of the silicon oxide film" which is a configuration of the present claims, it is respectfully submitted that the claims should be allowable.

Consideration of the above is respectfully requested.

In light of the above remarks, this application is believed to be allowable. The Examiner is asked to contact applicant's attorney at 503-224-0115 if there are any questions.

Respectfully submitted,

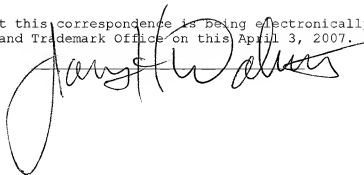

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Comments with Request for Pre-Appeal Review
U.S. Patent Application 10/737,393
April 3, 2007

I hereby certify that this correspondence is being electronically
transmitted to the Patent and Trademark Office on this April 3, 2007.

A handwritten signature in black ink, appearing to read "Jang H. Walter". The signature is written in a cursive, flowing style with a large loop at the end.